

Traverse City

Local Safety Initiative Review

Crash Data Examined:

January 1, 2009 - December 31, 2013

Field Review Date :_ 6/1/2015

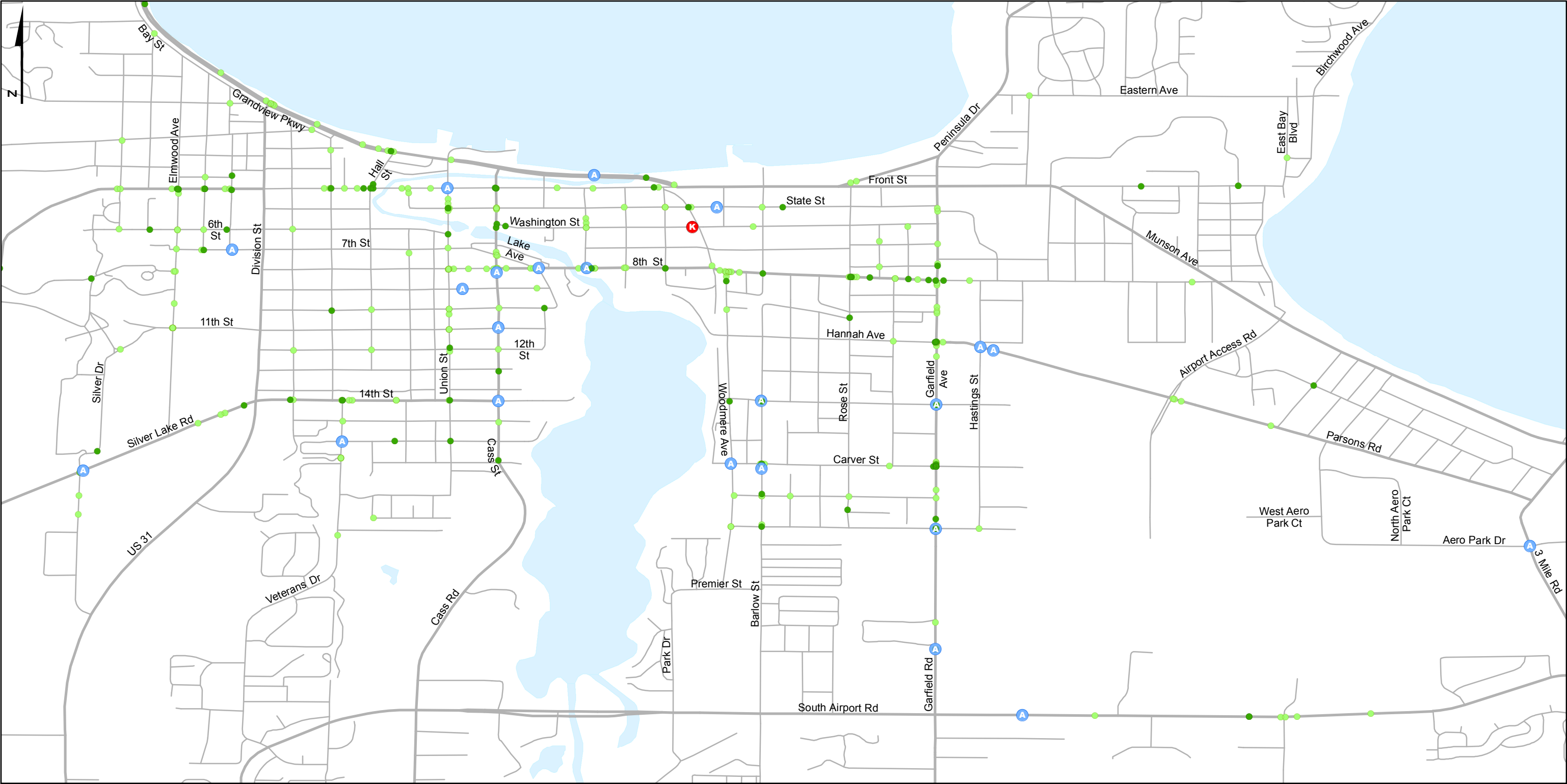
Suggestions from Field Review

General Suggestions:

- Consider reviewing citywide pavement markings for consistency and compliance with the MMUTCD
- Consider recessed pavement marking safety project
- Consider upgrading to larger street name signs in urban areas per MMUTCD
- Include a copy of this write-up if applying for Highway Safety Improvement Program (HSIP) funding. Projects related to locations identified through the Local Safety Initiative will receive extra consideration. The deadline for the FY 2017 call for safety projects is August 14, 2015. ([MDOT Local Agency Programs Safety Program](#))

Call for projects letter and more information about the application process may be found by contacting:

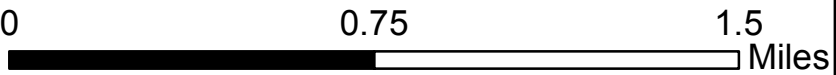
Lynnette Firman
(517) 335-2224
FirmanL@michigan.gov



Traverse City Crash Locations

Crash Data: 2009-2013

- A Incapacitating Injury
- K Fatal Injury
- Non-Incapacitating Injury
- Possible Injury



Intersections:

A. Front Street (PR 993610) and Union Street (PR 993806)

- Union Street (North/South), Front Street (East/West)(One-way to the West)
- Signalized Urban Intersection
- 40 Total Crashes: 36-PDO, 3-C, 1-A; 5-2009, 10-2010, 5-2011, 11-2012, 9-2013
 - 12 Rear End Straight (**RE-ST**) Crashes: 1 NB 9 WB, 2 SB
 - 4 Backing (**BCKNG**) Crashes: 1 SB, 3 WB
 - 3 Hit Parked Vehicle (**PKD-V**) Crashes: 1 NB, 1 SB, 1 WB
 - Westbound left turning truck struck vehicle parked on west side of Union St.
 - 5 Side Swipe Same (**SS-SM**) Crashes: 1 NB, 3 WB, 1 SB
 - Northbound left turning truck struck northbound vehicle stopped at light.
 - 3 Angle Straight (**AN-ST**) Crashes: 1 NB, 1 SB, 1 WB
 - Driver of westbound vehicle ran red light striking northbound vehicle. (3-A; 00:37; October 20, 2012; Clear sky; Dry Pavement; Alcohol .193% BAC; Younger driver)
 - 1 Southbound did not stop, striking eastbound – Signal in flash mode
 - 1 Northbound did not stop, striking westbound – Signal in flash mode
 - 2 Angle Driveway (**AN-DR**) Crashes: 2 WB
 - 2 Pedestrian (**PED**) Crashes: 2 WB; **2 C-Injuries**
 - 1 Pedestrian in crosswalk.
 - 1 Skateboard in bike lane.
 - 2 Rear End Left Turn (**RE-LT**) Crashes: 1 NB, 1 WB
 - 2 Head-On (**HD-ON**) Crashes: 2 EB
 - 2 Bicycle (**BIKE**) Crashes: 1 SB, 1 WB; **1 C-Injury**
 - 1 Fixed Object (**FXOBJ**) Crashes: 1 EB
 - Eastbound wrong-way driver struck pedestrian fence
 - 1 Head-On Left Turn (**HD-LT**) Crash: 1 NB
 - 1 Side Swipe Opposite (**SS-OP**) Crash: 1 NB
 - Crash Information:
 - 99 Uninjured occupants, 3 A-injuries, 3 C-injuries
 - 24 Crashes on dry pavement, 8 wet, 2 icy, 2 slushy, 2 snowy, 2 unknown
 - 16 Crashes involving a young driver
 - 11 Crashes involving an elderly driver
 - 6 Crashes involving alcohol
 - 4 Crashes involving a truck/bus
 - 3 "Hit-and-run" crashes
 - 2 Crashes involving a pedestrian
 - 2 Crashes involving a bicycle

- Field Review Date: 6/1/2015
 - Consider reviewing signal timing including all red and clearance intervals
 - Consider converting signal to box span
 - Consider reevaluating need for overnight flash mode

B. Garfield Avenue (PR 993403) and Boon Street (PR 3280054)

- Garfield Avenue (North/South), Boon Street (East/West)
- Signalized Urban Intersection
- 43 Total Crashes: 34-PDO, 6-C, 2-B, 1-A; 9-2009, 5-2010, 4-2011, 12-2012, 13-2013
 - 18 Rear End Straight (**RE-ST**) Crashes: 13 NB, 4 SB, 1 WB
 - 9 Angle Straight (**AN-ST**) Crashes: 7 SB, 2 NB, 2
 - 2 Southbound did not stop, striking westbound; **1 C-Injury**
 - 2 Northbound did not stop, striking westbound; **4 C-Injuries**
 - 5 Southbound did not stop, striking eastbound; **3 C-Injuries**
 - 5 Head-On Left Turn (**HD-LT**) Crashes: 3 WB, 1 NB, 1 SB; **2 B-Injuries, 1 C-injury**
 - 4 Angle Driveway (**AN-DR**) Crashes: 2 NB, 2 WB
 - 2 Pedestrian (**PED**) Crashes: 1 EB, 1 WB; **1 A-Injury, 1 C-injury**
 - **Westbound left turn struck pedestrian in crosswalk. (1-A; 16:23; November 20, 2011; Clear sky; Dry Pavement; Elderly driver)**
 - 2 Side Swipe Same (**SS-SM**) Crashes: 2 NB
 - 1 Misc. Multiple Vehicle (**MSC-MLT**) Crash: 1 SB
 - Tire fell off truck and struck northbound vehicle
 - 1 Side Swipe Opposite (**SS-OP**) Crash: 1 NB
 - 1 Angle Turn (**AN-TN**) Crash: 1 SB
 - Southbound through did not stop striking westbound left
 - Crash Information:
 - 109 Uninjured occupants, 1 A-injury, 2 B-injuries, 10 C-injuries
 - 25 Crashes on dry pavement, 9 snowy, 4 wet, 3 slushy, 1 icy, 1 unknown
 - 17 Crashes involving a young driver
 - 14 Crashes involving an elderly driver
 - 2 Crashes involving a pedestrian
 - 1 "Hit-and-run" crash
- Field Review Date: 6/1/2015
 - Consider tree maintenance on south leg of intersection
 - Consider installing pedestrian signal and ramps on north side of intersection
 - Consider implementing left-turn phase
 - Consider converting signal to box span

C. Eighth Street (PR 993010) and Boardman Avenue (PR 993809)

- Boardman Avenue (North), Eighth Street(East/West)
- Signalized Urban Intersection
- 36 Total Crashes: 28-PDO, 5-C, 2-B, 1-A; 3-2009, 6-2010, 11-2011, 6-2012, 10-2013
 - 17 Rear End Straight (**RE-ST**) Crashes: 11 WB, 3 EB, 2 SB, 1 NB; **3 C-Injuries**
 - 6 Side Swipe Same (**SS-SM**) Crashes: 4 WB, 2 EB
 - Westbound truck sideswiped vehicle while making a right turn.
 - 4 Bicycle (**BIKE**) Crashes: 4 SB
 - 3 Southbound struck eastbound bicyclist in crosswalk; **2 C-Injuries**
 - 1 Southbound right turn struck northbound bicyclist in crosswalk; **1 B-Injury**
 - 3 Angle Turn (**AN-TN**) Crashes: 3 WB
 - 3 Westbound did not stop, striking southbound left turn; **1 C-Injury**
 - 2 Head-On Left Turn (**HD-LT**) Crashes: 2 EB
 - 1 Rear End Driveway (**RE-DR**) Crash: 1 WB
 - 1 Pedestrian (**PED**) Crash: 1 EB; **1-B Injury**
 - 1 Fixed Object (**FXOBJ**) Crash: 1 WB
 - Westbound driver ran off road-right, striking utility pole. **(1-A; 02:05; January 01, 2009; Cloudy sky; Snowy Pavement; Alcohol 0.04% BAC)**
 - 1 Angle Straight (**AN-ST**) Crash: 1 WB
 - 1 Westbound did not stop striking southbound
 - Crash Information:
 - 98 Uninjured occupants, 1 A-injury, 2 B-injuries, 6 C-injuries
 - 14 Crashes on dry pavement, 8 wet, 6 snowy, 4 unknown, 3 slushy, 1 icy
 - 12 Crashes involving an elderly driver
 - 5 Crashes involving a young driver
 - 4 Crashes involving a bicycle
 - 3 "Hit-and-run" crashes
 - 2 Crashes involving alcohol
 - 1 Crash involving a pedestrian
 - 1 Crash involving a truck/bus
- Field Review Date: 6/1/2015
 - Consider converting signal to box span
 - Consider working with the utility company to relocate utility poles near intersection

D. Silver Lake Road (PR 992309) and Franke Road (PR 992908)

- Franke Road (North/South), Silver Lake Road (East/West)
- Signalized Urban Intersection
- 35 Total Crashes: 27-PDO, 7-C, 1-A; 6-2009, 6-2010, 4-2011, 10-2012, 9-2013
 - 11 Rear End Straight (**RE-ST**) Crashes: 4 NB, 3 EB, 3 WB, 1 SB; **3 C-Injuries**

- 6 Side Swipe Same (**SS-SM**) Crashes: 4 EB, 2 SB
 - Westbound vehicle turned right into moped traveling westbound on shoulder. (1-A; 11:35; August 25, 2012; Clear sky; Dry Pavement; Elderly driver)
- 5 Side Swipe Opposite (**SS-OP**) Crashes: 3 SB, 2 NB
- 5 Angle Turn (**AN-TN**) Crashes: 3 NB, 1 EB, 1 WB
 - 1 Westbound failed to yield to northbound left
 - 2 Northbound failed to yield to eastbound left; **3 C-Injuries**
 - 1 Eastbound did not stop, striking northbound left; **1 C-Injury**
 - 1 Westbound left failed to yield to southbound though
- 3 Head-On Left Turn (**HD-LT**) Crashes: 3 NB, **1 C-Injury**
- 2 Rear End Left Turn (**RE-LT**) Crashes: 2 NB
- 2 Angle Straight (**AN-ST**) Crashes: 2 EB
 - 1 Eastbound did not stop striking northbound
 - 1 Eastbound did not stop striking northbound car stopped in intersection
- 1 Rear End Right Turn (**RE-RT**) Crash: 1 NB
- Crash Information:
 - 89 Uninjured occupants, 1 A-injury, 8 C-injuries
 - 14 Crashes on dry pavement, 9 wet, 6 icy, 5 snowy, 1 slushy
 - 16 Crashes involving a young driver
 - 10 Crashes involving an elderly driver
 - 2 Crashes involving a truck/bus
 - 1 "Hit-and-run" crash
- Field Review Date: 6/1/2015
 - Left turn phase recently added, continue to monitor related crashes
 - Consider reviewing pavement markings at all approaches

E. Cass Street (PR 3280050) and 8th Street (PR 993010)

- Cass Street (North/South), 8th Street (East)
- Signalized Urban Intersection
- 26 Total Crashes: 18-PDO, 7-C, 1-A; 5-2009, 6-2010, 4-2011, 5-2012, 6-2013
 - 10 Rear End Straight (**RE-ST**) Crashes: 5 NB, 3 EB, 2 WB; **5 C-Injuries**
 - 5 Side Swipe Same (**SS-SM**) Crashes: 3 WB, 1 NB, 1 EB
 - 5 Angle Straight (**AN-ST**) Crashes: 2 EB, 1 NB, 1 SB, 1 WB
 - 1 Eastbound did not stop, striking northbound; **1 C-Injury**
 - 1 Northbound did not stop, striking eastbound
 - 1 Southbound vehicle did not stop, striking westbound
 - 1 Eastbound vehicle did not stop, striking southbound
 - 1 Westbound vehicle failed to yield to northbound; **1 C-Injury**
 - 3 Bicycle (**BIKE**) Crashes: 2 EB, 1 NB; 1 A-Injury, 2 C-injuries
 - Northbound vehicle attempted to pass bicyclist on the right, struck bicyclist, redirecting them into center median. (1-A; 23:11; May 05, 2009; Clear sky; Dry Pavement; Dark; Hit and Run)

- 1 Rear End Driveway (**RE-DR**) Crash: 1 WB
- 1 Backing (**BCKNG**) Crash: 1 SB
- 1 Fixed Object (**FXOBJ**) Crash: 1 EB
 - Eastbound vehicle did not stop at signal(flash mode), made an evasive maneuver, and struck building near intersection (Oldtown Playhouse)
- Crash Information:
 - 54 Uninjured occupants, 1 A-injury, 9 C-injuries
 - 16 Crashes on dry pavement, 7 wet, 2 snowy, 1 unknown
 - 10 Crashes involving a young driver
 - 8 Crashes involving an elderly driver
 - 6 "Hit-and-run" crashes (23%)
 - 3 Crashes involving a bicycle
 - 2 Crashes involving alcohol
 - 1 Crash involving a motorcycle
- Field Review Date: 6/1/2015
 - Consider reevaluating need for overnight flash mode
 - Consider upgrading intersection to box span configuration
 - Consider signal modernization with larger signal heads and simplified layout
 - Consider striping shoulder or turn lane on northbound approach to reduce lane width at intersection

F. Barlow Street (PR 997107) and Carver Street (PR 997107)

- Barlow Street (North/South), Carver Street (East/West)
- Stop controlled on Barlow Street
- 24 Total Crashes: 14-PDO, 8-C, 1-B 1-A; 2-2009, 5-2010, 4-2011, 5-2012, 8-2013
 - 15 Angle Straight (**AN-ST**) Crashes: 10 NB, 5 SB
 - 3 Southbound failed to yield to eastbound; **1 C-injury**
 - 1 Southbound failed to yield to westbound; **1 C-injury**
 - 1 Southbound did not stop, striking eastbound
 - 7 Northbound did not stop, striking eastbound; **2 B-injuries; 5 C-injuries**
 - 2 Northbound failed to yield to westbound
 - 1 Northbound failed to yield to eastbound
 - 4 Rear End Straight (**RE-ST**) Crashes: 3 NB, 1 WB
 - 2 Rear End Driveway (**RE-DR**) Crashes: 1 NB, 1 SB; **2 C-Injuries**
 - 1 Pedestrian (**PED**) Crash: 1 NB; **1 C-injury**
 - 1 Bicycle (**BIKE**) Crash: 1 WB
 - Northbound bicyclist was struck by vehicle backing westbound onto roadway (**1-A; 13:40; November 28, 2010; Cloudy sky; Dry Pavement**)
 - 1 Head-On Left Turn (**HD-LT**) Crash: 1 NB

- Crash Information:
 - 60 Uninjured occupants, 1 A-injury, 2 B-injuries, 10 C-injuries
 - 16 Crashes on dry pavement, 3 wet, 3 icy, 2 snowy
 - 8 Crashes involving an elderly driver
 - 7 Crashes involving a young driver
 - 1 Crash involving a pedestrian
 - 1 Crash involving a bicycle
- Field Review Date: 6/1/2015
 - Consider working with property owner on NE corner to trim vegetation that may be limiting sight distance
 - Consider installing retroreflective sign post sheeting on stop signs as well as increasing sign size

G. 14th Street (PR 992309) and Cass Street (PR 3280050)

- Cass Street (North/South), 14th Street (East/West)
- Signalized Urban Intersection
- 17 Total Crashes: 14-PDO, 2-C, 1-A; 3-2009, 6-2010, 2-2011, 3-2012, 3-2013
 - 3 Rear End Left Turn (**RE-LT**) Crashes:
 - 3 Head-On Left Turn (**HD-LT**) Crashes: 2 NB, 1 WB; **1 C-Injury**
 - 2 Rear End Straight (**RE-ST**) Crashes: 2 NB; **1 C-Injury**
 - 2 Side Swipe Same (**SS-SM**) Crashes: 2 EB
 - Eastbound truck sideswiped vehicle in adjacent lane while making a right turn.
 - 2 Side Swipe Opposite (**SS-OP**) Crashes: 1 SB, 1 WB
 - 1 Bicycle (**BIKE**) Crash: 1 EB
 - Eastbound bicycle disregarded crosswalk signal and collided with a northbound vehicle. **(1-A; 17:22; June 01, 2010; Cloudy sky; Dry Pavement; Young Driver)**
 - 1 Hit Parked Vehicle (**PKD-V**) Crash: 1 EB
 - 1 Backing (**BCKNG**) Crash: 1 NB
 - 1 Angle Straight (**AN-ST**) Crashes: 1 SB
 - 1 Southbound did not stop, striking westbound
 - 1 Angle Turn (**AN-TN**) Crashes: 1 WB
 - 1 Westbound failed to yield to southbound left turn
 - Crash Information:
 - 60 Uninjured occupants, 1 A-injury, 2 C-injuries
 - 7 Crashes on dry pavement, 5 wet, 2 icy, 2 snowy, 1 slushy
 - 5 Crashes involving an elderly driver
 - 3 Crashes involving a young driver
 - 2 "Hit-and-run" crashes
 - 1 Crash involving a bicycle
 - 1 Crash involving a truck/bus

- Field Review Date: 6/1/2015
 - Consider checking warrant for possible left-turn phase
 - Consider performing network analysis covering intersections in surrounding area
 - Consider permanent or temporary traffic calming measures on 15th Street if it is being used as an alternate route

H. Lake Avenue (PR 997501) and 8th Street (PR 993010)

- 8th Street (East/West), lake Avenue (North/South)
- Stop controlled on Lake Ave. Skewed intersection.
- 17 Total Crashes: 14-PDO, 2-C, 1-A; 1-2009, 4-2010, 1-2011, 5-2012, 6-2013
 - 4 Rear End Straight (**RE-ST**) Crashes: 2 EB, 1 NB, 1 WB
 - 4 Rear End Left Turn (**RE-LT**) Crashes: 3 WB, 1 SB; **1 C-Injury**
 - 3 Fixed Object (**FXOBJ**) Crashes:
 - 2 Ran off road – Left: 2 WB
 - 1 Ran off road – Right: 1 WB

Fixed Objects: 1 Tree, 1 Snowbank, 1 Curb

 - 2 Angle Turn (**AN-TN**) Crashes: 2 SB
 - 1 Southbound left failed to yield to eastbound through
 - 1 Southbound right stopped in intersection and was struck by eastbound through
 - 1 Pedestrian (**PED**) Crash: 1 WB; **1 C-Injury**
 - 1 Bicycle (**BIKE**) Crash: 1 EB
 - Northbound vehicle made right turn into bicyclist heading westbound in crosswalk. (1-A; 14:05; May 10, 2012; Clear sky; Dry Pavement)
 - 1 Side Swipe Same (**SS-SM**) Crash: 1 WB
 - 1 Rear End Driveway (**RE-DR**) Crashes: 1 EB
 - Crash Information:
 - 38 Uninjured occupants, 1 A-injury, 2 C-injuries
 - 11 Crashes on dry pavement, 3 snowy, 1 wet, 1 icy, 1 unknown
 - 7 Crashes involving an elderly driver
 - 2 Crashes involving a young driver
 - 1 Crash involving a pedestrian
 - 1 Crash involving a bicycle
 - 1 Crash involving a truck/bus
 - 1 "Hit-and-run" crash
- Field Review Date: 6/1/2015
 - Consider increasing stop sign size as well as installing retroreflective signpost sheeting
 - Consider installing intersection warning signs with optional advanced street name plaques along 8th Street

I. Hastings Street (PR 998208) and Parsons Road (PR 1000904,998004)

- Hastings Street (North/South), Parsons Road (East/West)
- Signalized Urban Intersection
- 17 Total Crashes: 15-PDO, 1-C, 1-A; 5-2009, 2-2010, 2-2011, 6-2012, 2-2013
 - 6 Rear End Straight (**RE-ST**) Crashes: 3 WB, 1 NB, 1 SB, 1 EB
 - 3 Angle Straight (**AN-ST**) Crashes: 3 EB
 - 2 Eastbound did not stop, striking southbound
 - 1 Eastbound did not stop, striking northbound
 - 2 Bicycle (**BIKE**) Crashes: 2 WB; **1 C-injury**
 - 1 Rear End Driveway (**RE-DR**) Crash: 1 SB
 - 1 Fixed Object (**FXOBJ**) Crash: 1 EB
 - Driver ran off road right into snowbank avoiding collision
 - 1 Rear End Right Turn (**RE-RT**) Crash: 1 NB
 - 1 Head-On Left Turn (**HD-LT**) Crash: 1 WB
 - **Westbound left turn failed to yield to right of way of eastbound motorcycle. (1-A; 07:34; April 13, 2012; Clear sky; Dry Pavement; Motorcycle)**
 - 1 Side Swipe Same (**SS-SM**) Crash: 1 WB
 - 1 Angle Turn (**AN-TN**) Crash: 1 SB
 - 1 Eastbound did not stop, striking southbound right
 - Crash Information:
 - 44 Uninjured occupants, 1 A-injury, 1 C-injury
 - 7 Crashes on dry pavement, 4 snowy, 3 icy, 2 wet, 1 unknown
 - 6 Crashes involving an elderly driver
 - 2 Crashes involving a bicycle
 - 2 Crashes involving a young driver
 - 1 Crash involving a truck/bus
 - 1 Crash involving a motorcycle
- Field Review Date: 6/1/2015
 - Consider converting signal to box span configuration
 - Consider additional and upgraded pedestrian signals
 - Consider providing more conspicuous access from Hastings Street to recreational trail, especially on southern leg of intersection

J. Garfield Avenue (PR 993403) and Centre Street (PR 3280039)

- Garfield Avenue (North/South), Centre Street (East/West)
- Stop Controlled on Centre Street
- 15 Total Crashes: 11-PDO, 2-C, 1-B, 1-A; 3-2009, 1-2010, 8-2011, 3-2013
 - 4 Head-On Left Turn (**HD-LT**) Crashes: 2 NB, 2 SB; **1 B-Injury, 2 C-injuries**
 - 3 Angle Straight (**AN-ST**) Crashes: 3 EB
 - 2 Eastbound did not stop, striking northbound
 - **(1-A, 1-C; 11:14; November 21, 2010; Rainy; Wet Pavement; Young driver; Elderly driver)**
 - 1 Eastbound failed to yield to southbound
 - 2 Rear End Driveway (**RE-DR**) Crashes: 1 SB, 1 EB; **1 C-Injury**
 - 2 Rear End Straight (**RE-ST**) Crashes: 1 EB, 1 WB
 - 1 Fixed Object (**FXOBJ**) Crash: 1 NB
 - Northbound driver ran off the road to the right and struck tree in effort to avoid colliding with a stopped vehicle
 - 1 Rear End Left Turn (**RE-LT**) Crash: 1 SB
 - 1 Rear End Right Turn (**RE-RT**) Crash: 1 SB
 - Southbound vehicle rear ended a turning school bus.
 - 1 Side Swipe Same (**SS-SM**) Crash: 1 SB
 - Crash Information:
 - 43 Uninjured occupants, 1 A-injury, 1 B-injury, 4 C-injuries
 - 7 Crashes on dry pavement, 7 wet, 1 snowy
 - 9 Crashes involving a young driver
 - 8 Crashes involving an elderly driver
 - 1 Crash involving a school bus
- Field Review Date: 6/1/2015
 - Consider increasing stop sign size to 36 inches
 - Consider installing retroreflective sign post sheeting on stop sign posts

K. Barlow Street (PR 997107) and Centre Street (PR 3280039)

- Barlow Street (North/South), Centre Street (East/West)
- Stop Controlled on Centre Street
- 13 Total Crashes: 10-PDO, 1-C, 1-B, 1-A; 2-2009, 3-2010, 3-2011, 3-2012, 2-2013
 - 12 Angle Straight (**AN-ST**) Crashes: 7 WB, 5 EB
 - 3 Westbound failed to yield to southbound
 - 2 Westbound did not stop, striking southbound; **1 C-injury**
 - **(1-A; 14:30; July 10, 2009; Cloudy sky; Dry Pavement; Motorcycle; Elderly driver)**
 - 1 Westbound failed to yield to northbound
 - 1 Westbound did not stop, striking northbound; **1 B-injury**
 - 5 Eastbound failed to yield to northbound
 - Police vehicle failed to yield
 - 1 Backing (**BCKNG**) Crash: 1 EB
 - Crash Information:
 - 25 Uninjured occupants, 1 A-injury, 1 B-injury, 1 C-injury
 - 8 Crashes on dry pavement, 3 snowy, 2 wet
 - 6 Crashes involving a young driver
 - 4 Crashes involving an elderly driver
 - 1 Crash involving an emergency vehicle
 - 1 Crash involving a motorcycle
- Field Review Date: 6/1/2015
 - Consider upgrading stop signs to 36 inch size.
 - Consider adding retroreflective sign post sheeting and cross traffic does not stop (W4-4P) to stop sign posts.
 - Consider converting intersection to all-way stop control
 - Consider reviewing stop sign placement stop sign placement

L. Cass Street (PR 3280050) and 11th Street (PR 993005)

- Cass Street (North/South), 11th Street (East/West)
- Stop Controlled on 11th Street
- 12 Total Crashes: 9-PDO, 2-C, 1-A; 2-2009, 2-2010, 1-2011, 2-2012, 5-2013
 - 8 Angle Straight (**AN-ST**) Crashes: 6 EB, 2 WB
 - 3 Eastbound failed to yield to northbound; **1 C-Injury**
 - 1 Eastbound did not stop, striking northbound
 - 2 Eastbound failed to yield to southbound
 - 1 Westbound failed to yield to southbound; **1 C-Injury**
 - 1 Westbound did not stop, striking northbound
 - 1 Rear End Driveway (**RE-DR**) Crash: 1 SB
 - 1 Rear End (**RE-ST**) Crash: 1 SB

- 1 Fixed Object (**FXOBJ**) Crash: 1 NB
 - Northbound vehicle ran off road right, striking a snowbank, to avoid collision with eastbound vehicle.
- 1 Pedestrian (**PED**) Crash: 1 EB
 - Eastbound vehicle could not see crosswalk and made left turn into group of pedestrians. (2-A; 17:58; October 27, 2012; Cloudy sky; Dry Pavement; Pedestrian; Young driver)
- Crash Information:
 - 25 Uninjured occupants, 2 A-injury, 2 C-injuries
 - 6 Crashes on dry pavement, 4 snowy, 2 wet
 - 6 Crashes involving an elderly driver
 - 4 Crashes involving a young driver
 - 1 Crash involving a pedestrian
- Field Review Date: 6/1/2015
 - Consider upgrading stop signs to 36 inch size.
 - Consider installing retroreflective sign post sheeting on stop sign posts
 - Consider working with adjacent school to restrict parking near intersection
 - Consider in street yield signs (R1-6) in crosswalk during school start and end times
 - Consider special markings maintenance schedule that would ensure crosswalk is visible at all times thought school year

Front Street (PR 993610) and Hall Street/Wadsworth Street (PR 993804/993803)

January 2009 – March 8, 2015

- Front Street (East/West), Hall Street/Wadsworth Street (North/South)
- Stop controlled on Washington Street
- 44 Total Crashes: 37-PDO, 3-C, 4-B; 4-2009, 9-2010, 3-2011, 3-2012, 13-2013, 10-2014, 2-2015
 - 10 Hit Parked Vehicle (**PKD-V**) Crashes: 7 NB, 2 SB, 1 WB
 - 8 Rear End Straight (**RE-ST**) Crashes: 5 WB, 2 EB, 1 SB (*Injuries: 1-C*)
 - 6 Angle Driveway (**AN-DR**) Crashes: 4 WB, 1 SB, 1 EB (*Injuries: 1-C*)
 - 5 Rear End Driveway (**RE-DR**) Crashes: 3 EB, 2 WB (*Injuries: 1-B*)
 - 4 Bicycle (**BIKE**) Crashes: 2 EB, 1 NB, 1 SB (*Injuries: 3-B*)
 - 3 Angle Turn (**AN-TN**) Crashes: 3 SB
 - Southbound left failed to yield to eastbound right turn
 - Southbound left failed to yield to westbound through
 - Southbound left failed to yield to eastbound through
 - 3 Angle Straight (**AN-ST**) Crashes: 3 SB
 - 3 Southbound failed to yield striking eastbound
 - 2 Side Swipe Same (**SS-SM**) Crashes: 1 EB, 1 WB
 - 1 Rear End Left Turn (**RE-LT**) Crash:
 - 1 Pedestrian (**PED**) Crash: 1 SB (*Injuries: 1-C*)
 - 1 Head-On Left Turn (**HD-LT**) Crash: 1 SB
 - 1 Rear End Right Turn (**RE-RT**) Crash: 1 EB
 - Crash Information:
 - 36 Crashes on dry pavement, 4 snowy, 3 wet, 1 slushy
 - 17 Crashes involving a young driver
 - 14 Crashes involving an elderly driver
 - 9 "Hit-and-run" crashes
 - 4 Crashes involving a bicycle
 - 4 Crashes involving a truck/bus
 - 2 Crashes involving a school bus
 - 1 Crash involving an emergency vehicle
 - 1 Crash involving alcohol
 - 1 Crash involving a pedestrian
- Field Review Date: 6/1/2015
 - Continue to monitor intersection and adjacent area for angle type and parking related crashes.
 - Consider realigning sidewalk on north side of intersection
 - Consider pedestrian bump-outs on north side of intersection to reduce crossing time
 - Consider reviewing adjacent on street parking configuration
 - Consider reviewing intersection volumes and warrants for additional intersection traffic control.

Segments:

1. Elmwood Avenue: Eleventh Street to Seventh Street

PR 1251607 MP 0.00 – 0.26 [0.26 mi]

- Paved urban/residential roadway, undivided.
- 16 Total Crashes: 15-PDO, 1-C; 4-2009, 3-2010, 3-2011, 4-2012, 2-2013
 - 10 Hit Parked Vehicle (**PKD-V**) Crashes: 6 SB, 4 NB
 - Vehicle leaving parking space failed to yield to northbound bus
 - 5 Side Swipe Same (**SS-SM**) Crashes: 4 SB, 1 NB; **1 C-Injury**
 - 1 Side Swipe Opposite (**SS-OP**) Crash: 1 SB
 - Southbound vehicle struck ambulance
 - Crash Information:
 - 30 Uninjured occupants, 1 C-Injury
 - 7 Crashes on dry pavement, 3 slushy, 3 unknown, 2 wet, 1 snowy
 - 6 "Hit-and-run" crashes
 - 3 Crashes involving an elderly driver
 - 1 Crashes involving a truck/bus
 - 1 Crash involving an emergency vehicle
 - 1 Crash involving a young driver
- Field Review Date: 6/1/2015
 - Consider delineating parking area along roadway

2. Hall Street: Front Street to Grandview Parkway

PR 993804 MP 0.02 – 0.12 [0.10 mi]

- Paved urban roadway, designated parking spaces – Angle SB, parallel NB
- 8 Total Crashes: 8-PDO; 1-2009, 1-2010, 3-2012, 3-2013
 - 5 Hit Parked Vehicle (**PKD-V**) Crashes: 5 NB
 - Fire apparatus struck legally parked vehicle
 - 2 Side Swipe Same (**SS-SM**) Crashes: 2 NB
 - Vehicle turned into ambulance that was passing in opposing traffic lane
 - 1 Angle Driveway (**AN-DR**) Crash: 1 EB
 - BATA parking lot.
 - Crash Information:
 - 9 Uninjured occupants
 - 8 Crashes on dry pavement
 - 2 Crashes involving an emergency vehicle
 - 2 "Hit-and-run" crashes
 - 1 Crash involving an elderly driver
 - 1 Crash involving a young driver
- Field Review Date: 6/1/2015
 - Continue to monitor crashes related to parallel/angled parking arrangement

3. Front Street: Pine Street to Franklin Street

PR 993610 MP 3.24 – 3.9 [0.66 mi]

- Paved urban roadway, designated parallel parking spaces – both sides, westbound one-way Pine to Boardman
- 78 Total Crashes: 73-PDO, 4-C, 1-B; 13-2009, 20-2010, 13-2011, 16-2012, 16-2013
 - 45 Hit Parked Vehicle (**PKD-V**) Crashes: 41 WB, 3 EB, 1 SB
 - Vehicle backed into legally parked motorcycle
 - 14 Side Swipe Same (**SS-SM**) Crashes: 13 WB, 1 EB; **1 C-Injury**
 - Westbound vehicle changed lanes into bus
 - 8 Rear End Straight (**RE-ST**) Crashes: 7 WB, 1 EB; **1 C-Injury**
 - 4 Crashes with cars stopped at midblock crosswalks
 - 3 Backing (**BCKNG**) Crashes: 2 WB, 1 NB
 - 2 Bicycle (**BIKE**) Crashes: 2 WB; **1 C-Injury, 1 B**
 - 2 Angle Driveway (**AN-DR**) Crashes: 2 NB
 - 1 Rear End Driveway (**RE-DR**) Crash: 1 WB; **1 C-Injury**
 - 1 Fixed Object (**FXOBJ**) Crash: 1 WB
 - Westbound vehicle ran off road in an unknown direction and struck a “Yield to Pedestrians” sign.
 - 1 Head-On (**HD-ON**) Crash: 1 EB
 - Wrong-way driver
 - 1 Side Swipe Opposite (**SS-OP**) Crash: 1 EB
 - Same wrong-way driver
 - Crash Information:
 - 132 Uninjured occupants, 4 C-injuries, 1 B-injury
 - 51 Crashes on dry pavement, 13 wet, 6 snowy, 3 slushy, 3 unknown, 2 icy
 - 34 Crashes involving an elderly driver
 - 20 Crashes involving a young driver
 - 17 "Hit-and-run" crashes
 - 4 Crashes involving alcohol
 - 2 Crashes involving a bicycle
 - 1 Crash involving a truck/bus
 - 1 Crash involving a motorcycle
- Field Review Date: 6/1/2015
 - Consider increasing size of street name signs at intersections
 - Consider reviewing placement of overhead crosswalks signs

4. State Street: Pine Street to Boardman Avenue

PR 993805 MP 0.2 – 0.5 [0.3 mi]

- Paved urban roadway, designated parking spaces, eastbound one-way
- 26 Total Crashes: 26-PDO; 1-2009, 2-2010, 8-2011, 5-2012, 10-2013
 - 17 Side Swipe Same (**SS-SM**) Crashes: 17 EB
 - 8 Vehicles attempting left from the right lane
 - 5 Hit Parked Vehicle (**PKD-V**) Crashes: 5 EB
 - 2 Angle Driveway (**AN-DR**) Crashes: 2 EB
 - 1 Backing (**BCKNG**) Crash: 1 WB
 - 1 Fixed Object (**FXOBJ**) Crash: 1 EB
 - Truck ran off road right, striking parking meter
 - Crash Information:
 - 71 Uninjured occupants
 - 15 Crashes on dry pavement, 7 wet, 3 snowy, 1 unknown
 - 8 Crashes involving an elderly driver
 - 8 Crashes involving a young driver
 - 3 "Hit-and-run" crashes
 - 1 Crash involving alcohol
 - 1 Crash involving a truck/bus
- Field Review Date: 6/1/2015
 - Continue to monitor segment for parking related crashes
 - Consider reviewing parking signing and roadway access locations

5. Garfield Avenue: City Limits to Hannah Avenue

PR 993403 MP 12.90 – 14.15 [1.25 mi]

- Paved 5-lane urban roadway
- 38 Total Crashes: 33-PDO, 2-C, 2-B, 1-A; 8-2009, 7-2010, 8-2011, 6-2012, 9-2013
 - 11 Angle Driveway (**AN-DR**) Crashes: 6 WB, 3 EB, 2 NB; **1 C-Injury**
 - 2 Bill Marsh Auto, 1 Hospitality Restaurant Group, 1 Save –a-lot, 1 Taco House, 1 Marathon, 1 Honor Bank
 - 10 Side Swipe Same (**SS-SM**) Crashes: 5 NB, 5 SB; **2 C-Injuries, 1 B**
 - 9 Rear End Straight (**RE-ST**) Crashes: 5 NB, 4 SB
 - 3 Fixed Object (**FXOBJ**) Crashes:
 - 3 Ran off road – Right: 2 NB, 1 SB

Fixed Objects: 2 Snowbanks, 1 Street Sign

- 2 Rear End Driveway (**RE-DR**) Crashes: 1 NB, 1 SB
 - 1 Bill Marsh Auto
- 1 Pedestrian (**PED**) Crash: 1 NB; **1 B-Injury**
 - Pedestrian struck while crossing Garfield Avenue near Forestlane Drive.
- 1 Rear End Left Turn (**RE-LT**) Crash: 1 SB

- 1 Overturn (**OTURN**) Crash: 1 WB
 - Westbound motorcycle leaving driveway lost control and rolled bike. (**1-A; 01:00; August 01, 2012; Clear sky; Dry Pavement; Motorcycle**)
- Crash Information:
 - 96 Uninjured occupants, 3 C-injuries, 2 B-injuries, 1 A-injury
 - 24 Crashes on dry pavement, 5 wet, 5 icy, 4 snowy
 - 14 Crashes involving an elderly driver
 - 14 Crashes involving a young driver
 - 2 Crashes involving alcohol
 - 2 "Hit-and-run" crashes
 - 1 Crash involving a pedestrian
 - 1 Crash involving a motorcycle
- Field Review Date: 6/1/2015
 - Continue to monitor for crashes related to roadway access
 - Consider reviewing access to roadway from adjacent businesses; consider combining driveways where feasible
 - Consider completing sidewalk along corridor